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quick facts on...

Alternatives to Manage Phosphorus in Lake Okeechobee

JULY 2001

The South Florida Water Management District

is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

Our Mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.

FOR MORE INFORMATION ABOUT OUR AGENCY

Visit our web site at www.sfwmd.gov or call 561-686-8800 or FL WATS 1-800-432-2045.

JULY 19, 2001

PUBLIC MEETING ANNOUNCED

See Reverse Side for Details

Lake Okeechobee and Phosphorus

The Lake Okeechobee Sediment Management Feasibility Study was initiated by the District in the fall of 2000 in order to analyze all of the possible options for reducing internal phosphorus loading in the lake. Internal phosphorus loading – which occurs when wind-driven waves move across the lake and stir up the phosphorus-rich mud into the water – is a problem because the high levels of phosphorus can lead to decreased water quality, more frequent blooms of blue-green algae, and other problems that may affect drinking water supplies, interfere with recreation and commercial activities, and harm plants and wildlife.

This fact sheet is the second in a series designed to keep interested members of the Lake Okeechobee community up-to-date on the status of the study and announce opportunities for public input.

Status of the Study

The Sediment Management Feasibility Study consists of five main tasks:

Task 1. Development of Goals and Performance Measures

Task 2. Development of Alternatives

Task 3. Work Plan for Evaluation of Alternatives

Task 4. Evaluation of Alternatives

Task 5. Stakeholder Prioritization of Alternatives

The "Goals and Performance Measures" report was finalized in June, and the project team is now focused on Task 2 – the development of a set of alternatives that, if implemented, could potentially meet the objective of reducing internal phosphorus loading in Lake Okeechobee.

Technology Assessment

The draft "Development of Alternatives" report presents an evaluation of 35 different sediment management technologies, which are also called process options (see back page of this fact sheet). In the report, each one of the 35 technologies is evaluated based on its advantages and disadvantages, use in other sediment management projects, findings and information presented in current research, and considerations unique to Lake Okeechobee.

Development of Alternatives

Based on the technology assessment described above, the technologies having the best potential to be feasible and effective in Lake Okeechobee are used as "building blocks" to create a set of sediment management alternatives. An alternative could be made up of just one technology, or it could be a combination of several different technologies. For example, a dredging alternative would be a combination of technologies for sediment removal, transport, dewatering, and disposal; while "No In-Lake Action; Monitor External Loads" (#1 in the list on the back) could stand alone. Each alternative will be fully evaluated against the final goals and performance measures developed during Task 1.

Public Meeting Announced

Public and stakeholder input on the draft Development of Alternatives report is essential to the study. To gather this critical feedback, the District will hold a public meeting on Thursday, July 19. A summary of the draft report will be presented, followed by a question and answer period. Anyone with an interest in the future of Lake Okeechobee is encouraged to attend.

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Sediment Management Technologies Considered for Lake Okeechobee

1. No In-Lake Action; Monitor External Loads
2. Biomanipulation – Management of Fish Populations
3. Biomanipulation – Lake Stage Management
4. Biomanipulation – Harvest Floating Vegetation Beds
5. In-Place Chemical Treatment – Aluminum Compounds
6. In-Place Chemical Treatment – Iron
7. In-Place Chemical Treatment – Calcium Carbonate
8. In-Place Chemical Treatment – Algicide
9. In-Place Chemical Treatment – Immobilization
10. Sediment Oxidation – Hydrogen Peroxide
11. Sediment Oxidation – Calcium Nitrate
12. Sediment Oxidation – Artificial Circulation
13. Water Column Management with Breakwaters
14. In-Place Containment – Engineered Capping/Armoring
15. In-Place Containment – Aqua-Blok Cap
16. Sediment Removal – Mechanical Dredging
17. Sediment Removal – Hydraulic Dredging
18. Sediment Removal – Pneumatic Dredging
19. Sediment Removal –Amphibious Dredging
20. Sediment Removal – Excavation in the Dry
21. Transport of Capping/Dredged Material by Barge
22. Transport of Capping/Dredged Material by Pipeline
23. Sediment Dewatering – Plate and Frame Filter Press
24. Sediment Dewatering – Belt Filter Press
25. Sediment Dewatering – Solid Bowl Centrifuge
26. Sediment Dewatering – Hydrocyclone
27. Sediment Dewatering – Passive
28. On-Site Treatment and Discharge of Water
29. Off-Site Treatment and Disposal of Water
30. Sediment Disposal – Off-Site Upland Disposal Facility
31. Sediment Disposal – On-Site Confined Disposal Facility
32. Sediment Disposal – On-Site Sump/CAD Facility
33. Sediment Disposal – On-Site Lakeside Wetland Disposal
34. Beneficial Reuse of Dredged Sediment – Soil Blending
35. Beneficial Reuse of Dredged Sediment – Soil Treatment

The next public meeting is scheduled as follows:

Purpose: To provide project information and receive input on the draft Development of Alternatives report

When: July 19, 2001, 6:30 pm – 8:00 pm

Where: Glades Campus, Palm Beach Community College
Lecture Hall, Room 122
1977 College Drive, Belle Glade, Florida

– FOR MORE INFORMATION –

To learn more about the Lake Okeechobee Sediment Management Feasibility Study and review either the final Goals and Performance Measures report or the draft Development of Alternatives report, visit the project web site at

http://www.sfwmd.gov/org/wrp/wrp_okee/projects/sedimentmanagement.html
or contact Karen Smith, the District's project manager at klsmith@sfwmd.gov or 561-682-2731.

